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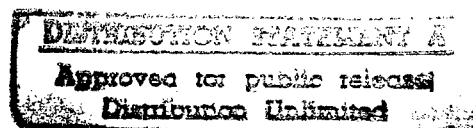
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CONSTRUCTION WORK IN VARIOUS ENTERPRISES IN COMMUNIST
CHINA'S IRON AND STEEL INDUSTRY

[Translation]

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FOREWORD

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CONSTRUCTION WORK IN VARIOUS ENTERPRISES IN COMMUNIST
CHINA'S IRON AND STEEL INDUSTRY

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[The following is a full translation of a part of a Japanese report entitled, "Development of the Iron and Steel Industry in China (Part II)," prepared by Okubo Tai of Asahi Shimbun Sha. Part I and a portion of Part II of the report have been omitted, because they are based primarily on a Chinese monograph Wo-kuo Kang-t'ieh, Tien-li, Mei-t'an, Chi-hsieh, Fang-chih, Tsao-chih Kung-yeh Ti Chin Hsi (Past and Present of China's Iron and Steel, Electric Power, Coal, Machine Building, Textile, and Paper Industries), published by the T'ung-chi Ch'u-pan-she, Peiping, July 1958.]

The following information concerning the construction work being undertaken by Communist China at various iron and steel enterprises appears spotty for it is based entirely on news items that appeared in the Jen-min Jih-pao, the Hsin-hua She, and the Ta Kung Pao.

A. Wuhan Iron and Steel Combine (Wuhan Iron and Steel Company)

1. Iron Ore Reserves

Wuhan has the first iron and steel works in China which began with an iron smelting plant constructed in Han-yang to utilize the iron ore reserve at Ta-yeh and coking coal deposit at P'ing-hsiang. For a long time the iron ore reserve at Ta-yeh was estimated at around 30 million tons, but New China, which made an intensive geological surveying of the locality with the help of Soviet technicians, made the following announcement in April 1953: "A large deposit of good grade magnesite ore bed, located 2-3 meters, below the surface, has been discovered at Chien-shan. This ore bed has enough reserve to satisfy the needs of a large iron and steel base for many years."

Aside from the iron ore reserve at Ta-yeh, a large iron ore vein with 40-50 percent iron content has been discovered in western Hupeh. It has been reported that this deposit alone has enough iron ore to supply an iron and steel combine with an annual production of 1.5 million tons for 200 years. (Peiping Broadcast, 23 January 1957).

"An iron ore vein which can sustain full operation of an iron and steel base" has been discovered in the P'ing-hsiang District in eastern Szechwan and "an iron ore deposit which can sustain operation of an iron and steel works with an annual production of 500,000 tons of steel for 150 years" also have been discovered in Chekiang. Also, an iron ore bed, said to have a thickness ranging from 30 to 200 meters, has been discovered near Hsing-ning in northern Kwangtung. In central Kiangsi, a deposit containing 5-7 billion tons of iron ore, larger than the iron ore reserve of An-shan, has been discovered. (Peiping Broadcast, 18 June 1958).

2. Development of Coking Coal

In the coking coal field, development of the P'ing-hsiang Coal Field in Kiangsi and the T'zu-hsing Coal Field in Hunan, and construction of a coal grading plant at Chu-chou with the help of Poland, are now in progress. In the P'ing-ting Shan and Hao-pi Districts in Honan, a new coal field with a total deposit of up to 2 million tons has been discovered and the area is now quickly being developed into a large coal industrial base called the "Donets Basin of China." According to an initial development plan, this area will eventually produce 9.6 million tons of coal annually.

3. Development of Electric Power

Construction of the Wuhan Heat and Electric Power Plant, the main power supplying base of the Wuhan Iron and Steel Combine, was begun on June 1953. The plant began partial operation in April 1954: at present, it is still undergoing intensive expansion work. This plant, one of the key projects being constructed with Soviet aid, will be equipped with six 37-meter vertical turbines and will become a large-scale power plant. In 1957, the plant had a total generating capacity equivalent to three times the total generating capacity of all other power plants in Wuhan at that time.

4. Construction of Iron Smelting and Steel Making Shops

After four years of preparation work, construction of the Wuhan Iron and Steel Combine, which will utilize the newly discovered rich iron ore and coking coal deposits, was officially begun in April 1957. The combine, one of the key construction projects being built with the Soviet aid, will consist of 15 major sections, including ore collecting, ore dressing, sintering, iron smelting, steel making, steel rolling,

and coke making sections, and more than 30 auxiliary plants and shops. Truly, it will become a large and most modern iron and steel combine.

The first stage construction is scheduled to be completed by the end of 1960, a year ahead of the original schedule. When the first stage construction is completed, the combine will have an annual steel production capacity of 1.5 million tons. (Hong Kong Ta Kung Pao, 18 March 1957).

The plant site, which covers an area of about 300,000 square meters, is located in the southeastern suburb of Wuhan. It has been reported that there are several tens of thousands of laborers now engaged in the construction of more than 100 buildings.

The No. 1 blast furnace, which began operation in September 1958, is the largest blast furnace in China; it is 80 meters high and has an annual production of 750,000 tons. Built around this blast furnace are coke ovens, a coke by-products plant, and a boiler room. Fifty percent of all the machinery to be installed at the combine will be manufactured in China, but the entire main machinery and installations will be manufactured in the Soviet Union.

Coke Ovens -- Construction of the No. 1 battery of coke ovens was completed on 1 June 1958, followed by the No. 2 battery completed on 13 October 1958, and the No. 3 battery completed on 11 May 1959.

Blast furnaces -- The No. 1 blast furnace, with a designed capacity of 1,446 cubic meters and a daily production capacity of 2,000-2,500 tons, began operation on 13 September 1958. Construction of the No. 2 blast furnace was begun in February 1959 and was completed in 4 months. The furnace began operation on 14 July 1959. The No. 2 blast furnace is almost identical to the No. 1 blast furnace; it is 70 meters high and has a designed capacity of 1,436 cubic meters and an annual production capacity of 700,000 tons.

Steel Making Plant -- the plant was designed by Soviet technicians; construction of it was begun in July 1958. The plant will have nine 500-ton capacity open-hearth furnaces, all of which are scheduled to be completed in 1960.

Rolling Mill -- Construction of the rolling mill, the core of the Wuhan Iron and Steel Combine, was begun in July 1959. The rolling mill was designed by Soviet technicians, and, according to the design, it is one of the foremost rolling mills in the world.

Heavy Machinery Plant -- Construction of the plant was begun in April 1956 [1958?]. The plant, which began partial operation in September 1958, is manufacturing heavy rolling mills, generators, and heavy milling machinery.

5. Production Plan

From April 1957 to July 1959, construction was completed on 120 out of 125 individual projects which were scheduled to be built in the iron smelting section during the first stage construction period. At present, the emphasis is placed on the construction of steel making and steel rolling sections. (Wuhan Hsin-hua She, 30 July 1959).

The 1959 production plan is 1.2 million tons of pig iron, 500,000 tons of steel, and 150,000 tons of steel materials. (Hong Kong Ta Kung Pao, 13 March 1959). The first stage construction plan is scheduled to be completed in 1960; by then the planned annual production of steel materials will have reached 1.5 million tons.

6. Ta-yeh Steelworks, Special Steelworks, Ore Dressing Plant

These three plants actually are parts of the Wuhan Iron and Steel Combine. Both the special steelworks and the ore dressing plant are key projects being built with Soviet aid. The ore dressing plant is under construction since 1957; it is a modern Soviet-type plant consisting of 6 sections, including rough-, medium-, and fine-ore crushing sections. When completed, this plant will become the principal ore supply base of the Wuhan Iron and Steel Combine.

Construction of the Ta-yeh Steelworks was begun in February 1954; the first stage construction was completed in April 1955. The expansion work is now in progress and the steelworks is scheduled to begin operation during the first 10 days of December 1958. (Wuhan Hsin-hua she, 10 March 1958). When the second stage expansion work is completed in 1959, the annual steel output of the steelworks will reach 1.2 million tons. Construction of three iron ore collecting plants was already completed in July 1958. Also finished construction are Nos. 1, 2, and 3 open-hearth furnaces on 1 June 1958, 1 July 1958, and in December 1958, respectively.

B. Pao-t'ou Iron and Steel Combine (Pao-t'ou Iron and Steel Company)

1. Development of Iron Ore Reserves

The Pao-t'ou Iron and Steel combine is conveniently located against the background which contains rich reserves of iron ore, coal, and fire-resistance materials. The iron ore mine at Pai-yun-o-po, located 120 kilometers north of Pao-t'ou, has a large deposit of rich ore with an iron content of 60 percent. A railway line connecting the mine with Pao-t'ou was completed in December 1956. This area also has the Sa-lachi Iron Ore Mining District located 30 kilometers east of Pao-t'ou and the Ku-yang Iron Ore Mining District located 50 kilometers north of Pao-t'ou. To the west of Pao-t'ou, three new iron ore veins were dis-

covered recently.

The development of the Pai-yun-o-po Iron Ore mine was begun during the last half of 1959. During the first half of 1959, a completely new town was built in the middle of a desolate land, near the mine. Actual mining operations began during the second half of 1959. During the first half of 1959, construction of an iron ore crushing plant was also completed. It is reported that this is one of the largest ore crushing plants in China.

2. Development of Coking Coal

It is estimated that the Shih-kuai-kou Coal Field, located 30 kilometers north of Pao-t'ou, has enough coking coal reserves to keep producing several million tons of coal annually for 100 years. At present the coal field is being developed into a modern coal mine.

New coal fields, as well as iron ore veins, have also been discovered at Sa-la-chi and Ku-yang. Furthermore, the Pao-t'ou area is located close to Shansi Province, which is the largest coal belt in China (estimated reserve, about 400 billion tons).

Development of the Shih-kuai-kou Coal Field was officially begun in 1955, beginning with the construction of Nos. 1, 2, and 3 shafts. Construction of the No. 4 shaft was begun in December 1957. The No. 1 shaft, with an annual production capacity of 300,000 tons, began operation in July 1957. By 1962, the coal field will have an annual production capacity of 6.5 million tons. A large coal dressing plant is also now under construction. Whether or not the coal field is being developed with the Soviet aid is unknown.

3. Construction of an Electric Power Station

The Pao-t'ou Power Station No. 1 was the first construction project to be completed in the course of the development of the Pao-t'ou Iron and Steel Combine. This is an old power station which was improved and expanded with the help of Soviet Union; it began operation in April 1950.

The main power stations of the Pao-t'ou Iron and Steel Combine will be the Pao-t'ou Heat and Electric Power Plants No. 1 and No. 2, both of which are large power stations being built with Soviet aid and will be producing electricity, hot water, and steam for the combine.

Construction of the Pao-t'ou Heat and Electric Power Plant No. 2 was begun in May 1956; by 1958, the plant began partial operation. Construction of the No. 1 heat and electric power plant was begun in May 1957. Generating capacity of these two plants is unknown; however,

according to the size of construction, they are believed to be of 50,000-100,000-kilowatt class.

4. Scope of Construction

Construction of the Pao-t'ou Iron and Steel Combine was officially begun in July 1957, after spending four years for the preliminary preparation work. It has been reported that this is a large-scale iron and steel combine with the newest production techniques and the most modern production equipment in the world and that it will consist of an iron smelting section, a steel making section, a rolling mill section, a coke making section, a fire-resistant materials section, and an iron ore mine. Now under construction are 11 buildings, including an iron smelting shop, a steel making shop, a machinery repair shop, a forging shop, and a casting shop. The No. 1 blast furnace is scheduled to be completed on 1 October 1959.

According to a design, the combine will have several tens of shops, including an ore collecting shop, an ore dressing shop, several large blast furnaces, several open-hearth furnaces, coke ovens, and several hundreds of kilometers of railway tracks. (Pao-t'ou Hsin-hua She, 1 May 1956).

The first state of construction is scheduled to be completed in 1961. When the entire construction work is completed, the combine will have an annual output of 1,467,000 tons of pig iron, 1,470,000 tons of steel, and 1,100,000 tons of steel materials.

5. Progress of Construction Work

Construction of the Pao-t'ou Iron and Steel Combine, which was begun in April ~~/sic/~~ 1957, entered full-scale construction in 1958. Now under construction are more than 80 individual construction projects, including a steel making shop, an iron smelting shop, a coke making shop, a fire-resistant materials shop, and a machinery shop.

Coke Ovens

- (a) Coke oven No. 4, completed on 22 May 1958. It supplies coke for blast furnace No. 1.
- (b) Coke oven No. 1, completed on 27 December 1958
- (c) Coke oven No. 3, completed on 22 August 1959. Its annual production capacity is 500,000 tons.
- (d) Coke oven No. 2, scheduled to be completed in 1959.

Blast Furnaces

- No. 1 blast furnace, completed in September 1959. Designed capacity, 1,513 cubic meters; annual production capacity, 900,000 tons

Open-hearth furnaces -- Both No. 1 and No. 2 open-hearth furnaces scheduled to be completed in 1959. They are the same type of open-hearth furnaces as those at the An-shan Iron and Steel Works. Daily production capacity is 1,300-1,500 tons.

Fire-resistant brick plant -- Two production systems completed during 1958.

Satellite plants -- (a) Machinery plants. Seven machinery repair plants are now under construction. The General Machinery Plant was completed in February 1958.
(b) Beginning in July 1958, construction will begin on an iron smelting plant with an annual output of 300,000-400,000 tons, a steelworks with an annual output of 200,000-300,000 tons, and a medium rolling mill with an annual output of 100,000-150,000 tons.

C. Improvement or Expansion of Existing Iron and Steel Combines (Improvement or Expansion Work Completed or in Progress at Existing Iron and Steel Combines)

<u>Name and Location</u>	<u>Status of Improvement or Expansion Work</u>
Pen-chi Iron and Steel Works (Liaoning)	-- Installation of three electric furnaces was begun in 1955. No. 1 furnace began operation in June 1955 and No. 2 furnace in August 1956; combined production capacity's about 200,000 tons, and designed capacity of each furnace is 200 tons.
T'ang-shan Steelworks (Hopeh)	-- It has the largest Bessemer converter in China. Other installations: a 5.5-ton Bessemer converter, a 5-ton electric furnace, a rolling mill (monthly output, 10,000 tons), and a casting shop (monthly output, 700 tons). The steelworks is being enlarged to raise annual steel output to 300,000 tons. It has 10 Soviet-type production systems.
Shih-ching-shan Iron and Steel Works (Hopeh)	-- It has two 500-ton blast furnaces, two 200-300-ton blast furnaces, a battery of coke ovens, and a casting shop. First stage expansion work completed in August 1956; the annual output then was roughly 250,000 tons, or 6.28 times the 1949 production.

- Peiping Steel-works

- Expansion work to convert the place into a large-scale iron and steel base was begun in 1958; when it is completed in 1961, the annual production capacity will reach 1.9 million tons of pig iron and 1.3 million tons of steel. (Peiping Jen-min Jih-pao, 28 May 1958).
 - Construction of a Bessemer converter (annual production, 100,000 tons) was completed in September 1958.
 - Construction of three Bessemer converters (annual production capacity, 300,000 tons) completed during 1958.
 - New No. 3 blast furnace completed (22 May 59)
 - New No. 3 coke ovens completed (23 May 59)
 - New sintering plant completed (23 May 59)
 - Began operation in May 1958; annual output, 200,000 tons of steel ingots and steel materials. The steelworks has been converted from the former Peiping Heating Equipment Plant.
- Tientsin Iron and Steel Works
No. 1 Plant
No. 2 Plant

- Began operation in 1953. Expansion work is still in progress. No. 1 rolling mill is being enlarged to raise its 1958 production capacity over that of 1957 by 77 percent.
 - Construction of No. 2 plant was begun in 1958, following the expansion work of the No. 1 plant. A large Bessemer converter at the No. 2 plant was completed in October 1958.
 - Annual production capacity, when construction of eight 10-ton Bessemer converters is completed, 800,000 tons of steel.
- Lung-yen Iron Smelting Works

- It has two old, small blast furnaces which were reactivated. Expansion work is being continued.
- T'ai-yuan Iron and Steel Works (Shansi)

- Restoration work was begun in April 1954; now it is a combine consisting of iron smelting, steel making and steel forging sections. Production capacity is over 200,000 tons. Since March 1956,

- No. 1 Plant
No. 2 Plant
- producing 10 types of alloy steel, including silicon steel and alloy tool steel.
- Construction of No. 2 Plant was begun in 1958. Annual production capacity of the plant when completed in 1960 will be 300,000 tons. Construction of an iron smelting plant with an annual output of 150,000 tons, a rolling mill, and a seamless steel tubing mill is also being planned. (T'ai-yuan Hsin-hua She, 13 September 1958).
 - No. 1 blast furnace completed in September 1958.
 - Steel tubing elongation plant completed in June 1958 (annual output, 100,000 tons).
- Hsi-nan Iron and Steel Company
(Chungking)
- This iron and steel company consists of the 101st, 102nd, and 104th Iron and Steel Works; its annual pig iron production capacity is 100,000 tons. Two blast furnaces completed in October 1956, Annual steel output is 30,000 tons.
 - Expansion work was begun in 1958; first stage expansion work will increase the annual output by 400,000 tons and second stage expansion work by 200,000 tons. No. 1 Bessemer converter completed on 21 September 1958. (Chungking Hsin-hua she, 22 September 1958).
- Ma-an-shan Iron and Steel Works
(Anhwei)
- One of the key projects being constructed with Soviet aid. Reactivated six blast furnaces in 1953. Construction of five new blast furnaces was begun in 1956. Pig iron output, when the entire construction work is completed in 1959 as planned, will reach three times the total 1953 output. 1957 output was seven times the previous highest annual output. (Hsin-hua She, 4 Jul 56; Peiping Broadcast, 22 December 1957).
 - Second stage expansion work, aiming to convert it into a large iron and steel combine, was begun in June 1958; when it is completed in 1960, steel output will have been increased from present 500,000 tons to 1.5 million tons to 2.3 million tons. To attain these production goals, five medium-size blast furnaces will be constructed.

Shanghai Iron
and Steel Com-
pany

Steelworks

No. 1

Steelworks

No. 2

Steelworks

No. 3

-- State-operated Shanghai Iron and Steel Company consists of Steelworks Nos. 1, 2, and 3. Steelworks No. 3 specializes in manufacturing high-gauge rails. Output of all three steelworks has been greatly increased through the completion of expansion work carried out during the First Five-Year Plan. In 1957, steel output was 7 times the 1952 output and steel material output was 5 times the 1952 output. The company can now produce 60 different types of steel and 600 different types of steel materials. (Peiping, Jen-min Jih-pao, 20 January 1958).

-- According to 1958 plan, Shanghai's total production capacity to 580,000 tons of steel and 800,000 tons of steel materials. (Shanghai Hsin-hua She, 5 February 1958).

-- A large steel beam plant (annual output, 300,000 tons), completed on 22 February 1959.

-- Construction of four blast furnaces (annual output, 500,000 tons) under construction at Steelworks No. 1; it is scheduled to be completed before March 1959.

-- No. 1 blast furnace (designed capacity, 255 cubic meters; annual output, 125,000 tons) of Steelworks No. 1, the first blast furnace in Shanghai, completed on 12 March 1959.

-- No. 2 blast furnace of steelworks No. 1, completed during 1958. (12 March 1959).

-- Seamless steel tubing mill (annual output, 80,000 tons) of Steelworks No. 1 under construction; it is scheduled to be completed during 1959.

-- No. 1 Bessemer converter (annual output, 600,000 tons) of Steelworks No. 3 completed. Several others also completed during 1958.

Asia Iron and
Steel Works
(Local-state
operated)
(Shanghai)

-- Restored during the First Five-Year Plan. Expansion work is being continued.

I-hua Iron and Steel Works (local state operated) (Shanghai) -- Restored during the First Five-Year Plan. Expansion work is being continued.

Li-feng Iron and Steel Works (Public-private jointly-operated) (Shanghai) -- Restored during the First Five-Year Plan. Expansion work is being continued.

Hsin-ou Iron and Steel Works (Local-state operated) (Shanghai) -- Restored during the First Five-Year Plan. Expansion work is being continued.

Chen-ju Iron and Steel works (Shanghai) -- Restored during the First Five-Year Plan. Expansion work is being continued.

Lai-pin Manganese Mine (Kwangsi) -- One of the major expansion projects started with a fixed investment (10 million yuan, or about 150 million yen) during the First Five-Year Plan. Began operation from the end of 1957.

T'ang-shan Fire-Resistant Materials Plant (Hopeh) -- One of the major expansion projects started with a fixed investment (10 million yuan, or about 150 million yen) during the First Five-Year Plan. Began operation from the end of 1957.

Tsun-i Manganese Mine (Kweichow) -- One of the major expansion projects started with a fixed investment (10 million yuan, or about 150 million yen) during the First Five-Year Plan. Began operation at the end of 1957.

Lung-yen Iron Ore Mine (Shansi) -- One of the major expansion projects started with a fixed investment (10 million yuan, or about 150 million yen) during the first Five-Year Plan. Began operation from the end of 1957.

D. Construction of New Iron and Steel Combines (Construction of New Medium-size Iron and Steel Combines)

<u>Name and Location</u>	<u>Status of Construction</u>
Urumchi Iron and Steel Works (Sinkiang)	One of the key projects being constructed with Soviet aid. No. 1 blast furnace completed in April 1954. Undergoing expansion work since March 1957.

- Expansion work was begun in August 1958; when it is completed in 1960, the annual production capacity will reach 800,000 tons of pig iron and 600,000 tons of steel.
- An-yang Iron and Steel Works (Hanon) -- A small iron and steel combine; annual output, 200,000 tons of pig iron and 100,000 tons of steel. Construction will begin during the last half of 1958; scheduled to be completed are an iron smelting shop in last half of 1959 and a steel making shop in 1960. (An-yang Hsin-hua She, 9 February 1958).
- Construction will begin in August 1958; annual production capacity when completed will be 800,000 tons of steel, 700,000 tons of pig iron, and 500,000 tons of steel materials.
- No. 1 blast furnace (designed capacity, 255 cubic meters) completed, (19 May 1959).
- New Shanghai Iron and Steel Combine (Plan) -- Scheduled to begin construction in April 1958. The combine will consist of 10 or more sections, including a blast furnace section, a steel making section, and a steel tubing section. Planned annual output is 600,000 tons of steel materials. When completed, the combine can produce enough steel materials and steel tubing to meet the requirements of shipbuilding and chemical industries in Shanghai. (Peiping, Jen-min Jih-pao, 13 March 1958).
- Chekiang Iron and Steel Works (Hang chow) -- Construction was begun August 1957. No. 1 blast furnace completed and began operation in February 1958. Planned annual production capacity at the end of 1962, is 300,000 tons of pig iron, 240,000 tons of steel, and 200,000 tons of steel materials. (Hang-chow Hsin-hua She, 27 February 1958).
- Canton Iron and Steel Works (Kwangtung) -- Construction was begun in October 1957; it will consist of building a coke section, an iron smelting section, a steel making section, and a rolling mill. There will be installed all domestically manufactured machinery and installations. Planned annual production capacity is 140,000-340,000 tons of pig iron and 40,000 tons of small steel materials. First stage construction is scheduled to be completed during the third and

fourth quarters of 1958. (Canton Hsin-hua She, 8 October 1957) (Peiping Jen-min Jih-pao, 15 Jan 1958).

- When completed, it will become a large combine consisting of a blast furnace section (three blast furnaces) a coke section (two batteries), an electric furnace, an open-hearth furnace, a Bessemer converter, a rolling mill, a seamless steel tubing section, a forging section, and a chemical industrial section. (Canton Hsin-hua She, 3 Jul 1958).
- K'un-ming Iron and Steel Works (Yunnan)
 - No. 1 blast furnace (designed capacity, 255 cubic meters) completed. (1 July 1959).
 - Construction was begun during the First Five-Year Plan; it is scheduled to be completed during the Second Five-Year Plan. Production capacity unknown.
 - No. 3 blast furnace completed in May 1959.
- Hupei Iron and Steel Works (O-ch'eng)
 - Construction was begun in August 1957; blast furnace is scheduled to be completed during the 4th quarter of 1958. Annual production capacity; 150,000 tons of pig iron and 100,000 tons of steel.
 - Construction was begun in March 1958; first stage construction was completed during the first half of 1959. Annual production capacity: 200,000 tons of pig iron, 140,000 tons of steel, and 100,000 tons of steel materials.
 - No. 1 blast furnace (capacity, 83 cubic meters) completed in October 1958.
- Su-chou Iron Smelting Plant (Kiangsu)
 - First stage construction was begun in August 1957 to construct a blast furnace with an annual production of 360,000 tons of pig iron. To be constructed during the second stage construction are two blast furnaces, a steel making shop, and a rolling mill.
- Tsinan Iron and Steel Works (Shantung)
 - Construction is scheduled to begin during the last half of 1958. The iron and steel works will be located in the eastern outskirts of Tsinan. Ac-

According to the original plan, construction was to be completed in 1962 and the annual production capacity was to be 350,000 tons of pig iron, 300,000 tons of steel, 190,000 tons of steel materials, 60,000 tons of steel beams, and 500,000 tons of coke, but during 1958, the plan was revised to complete the construction in 1960 and the production capacity was raised to 600,000 tons of steel, 900,000 tons of pig iron, 500,000 tons of steel materials, and 500,000 tons of coke.

-- No. 4 blast furnace (designed capacity, 200 cubic meters, daily production capacity, 140 tons), completed in July 1959.

Chiu-ch'uan Iron
and Steel Com-
pany (Kansu)

-- Construction was begun in August 1958. This is the same scale iron and steel combine as those under construction at Wuhan and Pao-t'ou. No. 1 blast furnace will have a daily production capacity of 3,000 tons, the same size as the No. 1 blast furnaces at An-shan, Wuhan, and Pao-t'ou, and is said to be one of the largest blast furnaces in the world (Hong Kong Ta Kung Pao, 30 December 1958).

-- The combine will get iron ore from Ching-t'ieh Shan, fire-resistant material from Ch'i-lien Shan, coal from Kansu Province, and electricity from a hydro-electric power station on the Hei Ho. (Hong Kong Ta Kung Pao, 19 June 1958).

Hai-nan Island
Iron and Steel
Company
(Kwangtung)

-- Construction was begun at the foot of the Wu-chih Shan in 1958. Annual production capacity: 700,000 tons of pig iron, 350,000 tons of steel, 240,000 tons of steel materials, and 200,000 tons of coke. The company will have two 100-cubic-meter blast furnaces (one was completed in April 1959). (Hong Kong Ta Kung Pao, 9 January 1959).

-- Under construction around the iron and steel company are a cement plant, the I-ho Hydro-electric Power Station, three brick plants, a chemical fertilizer plant, a nylon plant, a textile plant, and a food-processing plant. (Hong Kong Ta Kung Pao, 9 January 1959).

- Lin-fen Iron and Steel Works (Shansi) -- Construction was begun in 1958. When completed in 1962, the annual production capacity will be one million tons of pig iron and 500,000 tons of steel. No. 1 blast furnace (designed capacity, 100 cubic meters), completed on 28 December 1958. Nos. 2, 3, and 4 blast furnaces are under construction. (T'ai-yuan Hsin-hua She, 2 January 1959).
- San-ming Iron and Steel Works (Fukien) -- Construction of this medium-size iron and steel combine was begun in June 1958. Annual production capacity: 200,000 tons of pig iron, 200,000 tons of steel, and 150,000 tons of steel materials. (Foochow Hsin-hua She, 4 January 1959).
- Shih-chu-tze Iron and Steel Enterprise (Ningsia) -- Construction of this iron and steel combine was begun in November 1958. A 100-cubic meter blast furnace will be constructed.
- Huhehot (Hu-ho-hao-t'e) Iron and Steel Works (Inner Mongolia) -- Construction was begun in 1958. No. 1 blast furnace (designed capacity, 55 cubic meters), completed in October 1958.
- Annual production capacity when completed; 200,000 tons of pig iron, 100,000 tons of steel, and 80,000 tons of steel materials.
- Tsingtao Iron and Steel Works (Shantung) -- Construction was begun in September 1958; it is scheduled to be completed in 1959. Annual production capacity; 550,000 tons of pig iron and 400,000 tons of steel. To be constructed are steel rod, angle steel, and silicon steel plate, and steel tubing plants.
- Sian Steelworks; Pao-chi Welded Steel Tubing Plant (shensi) -- Construction was begun in 1958; first stage is scheduled to be completed in 1959 and second stage in 1960. To be constructed during 1958 are No. 1 blast furnace (annual production capacity, 800,000 tons), No. 1 Bessemer furnace (annual production capacity, 300,000 tons), a steel tubing plant, and a rolling mill.
- Pao-chi Welded Steel Tubing Plant will be equipped with Soviet machinery. It will specialize in making large-diameter oil pipes. To be completed in 1960.

- Ha-mi Iron and Steel Works (Sinkiang) -- Construction was begun in October 1958. Like the Urumchi Iron and Steel Works, it is scheduled to be completed in 1960. Annual production capacity; 800,000 tons of pig iron and 600,000 tons of steel.
- P'ing-hsiang Iron and Steel Works (Kiangsi) -- Expansion work was begun 1958. A blast furnace (designed capacity, 83 cubic meters), completed in October 1958.
- Annual production capacity after six blast furnaces and three Bessemer converters are completed, will be 500,000 tons of pig iron and 300,000 tons of steel.
- T'ung-kuan-shan Iron and Steel Works (Anhwei) -- Construction was begun in July 1958; it is scheduled to be completed in 1959. Annual production capacity; 450,000 tons of pig iron, 300,000 tons of steel, 255,000 tons of steel materials, and 300,000 tons of sintered iron ore.
- Ho-fei Iron and Steel Works (Anhwei) -- Construction was begun in 1958. One Bessemer converter (annual output, 100,000 tons), completed in September 1958.
- Planned to be built: four blast furnaces (each 255-cubic meter capacity), a Bessemer converter (annual output, 500,000 tons), a thin plate rolling mill (annual output, 50,000 tons), a seamless steel tubing mill, a rolling mill, and an electric furnace plant.
- An-tung Iron and Steel Works (Liaoning) -- Planned to be built during the Second Five-Year Plan. It will be a large iron and steel combine with an annual output of 2 million tons of pig iron and 2 million tons of steel.
- Chiang-yu Iron and Steel Works (Szechwan) -- Construction was begun in July 1958; it was partially completed in late 1958. Annual production capacity when completed: 1.5 million tons of pig iron and 1.5 million tons of steel.
- Han-tan Steel-works (Hopeh) -- Expansion work was begun in July 1958. Annual production capacity when the first stage construction is completed in 1960: 900,000 tons of pig iron, 600,000 tons of steel, and 500,000 tons of steel materials.

- Annual steel output when the second stage construction is completed in 1962: 1.2 million tons.
- T'ung-hua Iron and Steel Works (Kirin)

-- Construction was begun in June 1958; it is scheduled to be completed in 1960. Annual production capacity: 1.2 million tons of pig iron, 600,000 tons of steel, 580,000 tons of steel materials, and 1.2 million tons of coke.

-- There also is a chemical fertilizer plant with an annual output of 400,000 tons.
- Ch'eng-te Steelworks (Hopeh)

-- This is the fourth steelworks in Hopeh Province; the other three are located at Han-tan, Shih-chia-chuang, and I-hua. Construction was begun in June 1958; it is scheduled to be completed in 1962. Annual production capacity; 750,000 tons of pig iron and 600,000 tons of steel. The steelworks has a coal-tar plant and an ammonium sulphate plant.
- Tu-yun Iron and Steel Works (Kweichow)

-- First stage construction was completed in 1958; second stage construction is scheduled to be completed in 1962. Annual production capacity: 180,000 tons of pig iron, 180,000 tons of steel, and 180,000 tons of steel materials.
- Nan-ning Iron and Steel Works (Kwangsi)

-- Construction was begun in 1958. Annual production capacity: 270,000 tons of pig iron, 100,000 tons of steel, and 80,000 tons of steel materials.
- Kuei-yang Steelworks (Kweichow)

-- Construction was begun in April 1958; it is scheduled to be completed in 1959. Annual production capacity: 60,000 tons of steel materials.
- Hunan Steelworks (Hunan)

-- Construction was begun in March 1958; it is scheduled to be completed in 1960. Annual production capacity: 600,000 tons of steel.
- Ha-erh-shan Iron and Steel Works (Shansi)

-- Construction was begun in May 1958. Annual production capacity: 170,000 tons of pig iron, 100,000 tons of steel, and 80,000 tons of steel materials.
- Hsin-yu Iron and Steel Works (Ho-hsi)

-- To be completed by 1962. Annual output: 1.5 million tons of steel.

Yung-hsin Iron and Steel works (Hohsi) -- To be completed by 1962. Annual output: one million tons of steel.

Small-scale Steelworks in Shansi Province -- Under construction at Hsiang-pan, Ning-wu, Meng-hsien, Chin-hsien, and Ku-hsien, all of which are small-scale steelworks, equipped with domestically manufactured installations. These five small steelworks will have a total of 11 blast furnaces with a combined annual production capacity of 180,000 tons of steel.

-- During the First Five-Year Plan, 470 old-type furnaces have been constructed. These furnaces are now producing 70,000 tons of pig iron.

Nanking Iron and Steel Works -- No. 2 blast furnace, completed on 30 July 1959. This is the most modern medium-size blast furnace in Kiangsu Province. It has a designed capacity of 255 cubic meters and an annual production capacity of 130,000 tons of pig iron.

Tientsin Seamless Steel Tubing Plant -- First stage construction completed in 1958; second stage construction completed in July 1959. Annual output: 15,000-20,000 tons.

Hsi-ch'ang Iron and Steel Works (Szechwan) -- It is located on the proposed Ch'eng-Tu-K'un-ming railway. A plan calls for construction of an "extra-large class" iron and steel combine. The "extra-large class" denotes the size equivalent to the Wuhan and Pao-t'ou Iron Steel Combines.

Hangchow Steel Tubing Plant -- Will begin operation in August 1958. Annual production capacity: 10,000 tons.

Shanghai Silicon Steel Material Plant -- Construction was begun in October 1957; it was completed in July 1958. Annual production capacity is 30,000 tons. Although the T'ai-yuan Iron and Steel Works and the An-shan Iron and Steel Works produce some silicon steel, most of the requirement had to be imported.

T'ai-yuan Steel Tubing Plant -- A large-scale steel tubing plant with an annual output of 100,000 tons. Construction was begun in June 1958. The plant began partial operation in January 1959.

Hu-la-lu-ki Special Steel Plant (Heilung- kiang)	-- One of the key projects started during the First Five-Year Plan with a fixed, investment (10 mil- lion yuan, or about 1.5 billion yen). Began par- tial operation in late 1957.
Kirin Metal Al- loy Plant	-- One of the key projects started during the First Five-Year Plan with a fixed investment (10 mil- lion yuan, or about 1.5 billion yen). Began par- tial operation in late 1957.
Jehol Vanadium Mine	-- One of the key projects started during the First Five-Year Plan with a fixed investment (10 mil- lion yuan, or about 1.5 billion yen). Began par- tial operation in late 1957.

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